REMARKS:

Claims 1, 7, 8, 11, 17, 18, and 51-56 are currently pending. Claims 1 and 11 have been amended herein.

1. Claims 1 and 11 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,746,844 (**Sterett et al.**) in view of U.S. Patent No. 4,656,048 (**Kudoh et al.**) and U.S. Patent No. 6,309,711 (**Tseng et al.**).

Applicants respectfully traverse this rejection, for the following reasons.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue.

A. Design step

U.S. Patent No. 4,656,048 (**Kudoh et al.**) states that "The present invention additionally provides a method which involves measuring the distance from a given level to the surface of the substrate without contacting it to detect its surface irregularities and controlling the nozzle position above the substrate according to the detected surface irregularities while the nozzle moves along the

path of a circuit pattern so that the nozzle slit opening follows a path closely parallel with the surface contour of the substrate" (column 2, lines 33-42).

Further details regarding those aspects of **Kudoh et al.** are provided in **Kudoh et al.** from column 3, line 56 to column 4, line 34, and in Figures 12 and 13.

Kudoh et al. utilizes the measured distance for controlling the nozzle position above the substrate.

Contrary to **Kudoh et al.**, the features set forth in the subject application utilize the set of data prepared at a design step of a car or machine for controlling the nozzle position above the substrate. The specification of the subject application explicitly states: "At a design step of the car 1, there is prepared a set of data determining a position and a shape of each construction members, electrical instruments, parts, and electric circuits for connection among the instruments. The three-dimensional data D1 based on a coordinate system CA of the car 1 is a part of the whole data prepared at the design step of the car 1" (page 52, lines 10-16).

The conversion of the set of data to the second set of three-dimensional data eliminates preparation of the two-dimensional drawing (specification of subject application, page 3, lines 19-21).

B. Converting the set of three-dimensional data to a second set of three-dimensional data

Kudoh et al. measures the surface irregularities of the substrate 18 mounted on the work bench 12 (FIG. 12), which is driven by a X-axis and a Y-axis motor, with the laser beam emitting from a predetermined position (col. 3, lines 60-67) at the laser head 13. Then, the substrate 18 is moved to be positioned under the drawing head 14. The drawing head 14 is then controlled to keep the distance thereof from the substrate 18 (19) including the surface irregularities, constant (col. 4, lines 1-5) with the distance information signal.

In **Kudoh et al.**, it is apparent that the positions (coordinates of X and Y) of the surface irregularities should be the same even when the substrate 18 is moved under the drawing head 14 to draw the circuit. When the positions of the surface irregularities are changed, drawing of the circuit on the substrate cannot be successfully achieved.

In **Kudoh et al.**, the detected distances (coordinate of Z) are only transformed so that the nozzle 7 ejects the drawing paste while the slit opening 8 (the drawing head 14) is kept the distance constant from the substrate (including the irregularities). Accordingly, **Kudoh et al**. only converts the coordinate Z to, for example Z': that is, from XYZ to XYZ'.

However, the features disclosed by the subject application convert a set of three-dimensional data (XaYaZa, FIG. 18) to a second set of three-dimensional data (XbYbZb, FIG. 3).

Accordingly, in view of the above, **Kudoh et al.** fails to describe, teach, or suggest the combinations of features as set forth in the disclosure of the subject application. **Kudoh et al.** is discussed herein above.

Sterett et al. and **Tseng et al.** fail to remedy the above-discussed deficiencies of **Kudoh et al.** The combination of **Kudoh et al.**, **Sterett et al.**, and **Tseng et al.** is discussed herein below.

C. Claim 1

Sterett et al., **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended. For example, **Sterett et al.**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the electric circuit used for electrical connection between electric instruments mounted on the construction member,
>
> wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric

circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Sterett et al., **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data associated with a reference coordinate system provided in the construction member disposed on a transfer unit and having the origin in the construction member.

Sterett et al., **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the construction member to form the electric circuit on the construction member based on the second set of three-dimensional data,

wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claim 1 should be withdrawn.

D. Claim 11

Sterett et al., **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended. For example, **Sterett et al.**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the electric circuit used for electrical connection between electric instruments mounted on the construction member,
>
> wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Sterett et al., **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data

associated with a reference coordinate system provided in the construction member or on the intermediate member disposed on a transfer unit and having the origin in the member provided.

Sterett et al., **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the intermediate member to form the electric circuit on the surface of the intermediate member based on the second set of three-dimensional data,

wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claim 11 should be withdrawn.

E. Claims 1 and 11

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue, as discussed herein above. In view of those substantial,

important differences, it would not have been obvious to combine/modify the cited art as suggested by the Examiner to attempt to arrive at the features set forth in **claims 1** and **11**.

Even if, *arguendo,* the teachings of the cited art could be combined in the manner suggested by the Examiner, which they could not, such combined teachings would still fall far short of the combinations of features as set forth in claims 1 and 11. Thus, a person of ordinary skill in the art would not have arrived at the combinations of features as set forth in claims 1 and 11.

The Examiner has not yet established a *prima facie* case of obviousness. But it is the burden of the Examiner to do so. The U.S. Patent and Trademark Office has the burden of proof to show that an applicant is not entitled to a patent if the claimed subject matter is anticipated by, or is obvious from, the art of record. A patent applicant is entitled to a patent "unless" the U.S. Patent and Trademark Office establishes otherwise.

In view of the foregoing remarks, it is respectfully believed that essential elements of a *prima facie* case of obviousness are missing.

Accordingly, Applicants respectfully submit that this rejection of **claims 1** and **11** should be withdrawn.

2. Claims 1 and 11 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,520,402 (**Orme-Marmerilis et al.**) or Japanese Patent No. 10-266803 (**Yamaguchi**) in view of U.S. Patent No. 4,656,048 (**Kudoh et al.**) and U.S. Patent No. 6,309,711 (**Tseng et al.**).

Applicants respectfully traverse this rejection, for the following reasons.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue.

Orme-Marmerilis et al., **Yamaguchi**, and **Tseng et al.**, alone or in combination, fail to remedy the above-discussed deficiencies of **Kudoh et al.**

Orme-Marmerilis et al., **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended. For example, **Orme-Marmerilis et al.**, **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the

electric circuit used for electrical connection between electric instruments mounted on the construction member,

wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Orme-Marmerilis et al., **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data associated with a reference coordinate system provided in the construction member disposed on a transfer unit and having the origin in the construction member.

Orme-Marmerilis et al., **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the construction member to form the electric circuit on the construction member based on the second set of three-dimensional data,

wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claim 1 should be withdrawn.

Orme-Marmerilis et al., **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended. For example, **Orme-Marmerilis et al.**, **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the electric circuit used for electrical connection between electric instruments mounted on the construction member,
>
> wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Orme-Marmerilis et al., **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data

associated with a reference coordinate system provided in the construction member or on the intermediate member disposed on a transfer unit and having the origin in the member provided.

Orme-Marmerilis et al., **Yamaguchi**, **Kudoh et al.**, and **Tseng et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the intermediate member to form the electric circuit on the surface of the intermediate member based on the second set of three-dimensional data,
>
> wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claim 11 should be withdrawn.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue, as discussed herein above. In view of those substantial, important differences, it would not have been obvious to combine/modify the cited art as suggested by the Examiner to attempt to arrive at the features set forth in **claims 1** and **11**.

Even if, *arguendo,* the teachings of the cited art could be combined in the manner suggested by the Examiner, which they could not, such combined teachings would still fall far short of the combinations of features as set forth in claims 1 and 11. Thus, a person of ordinary skill in the art would not have arrived at the combinations of features as set forth in claims 1 and 11.

In view of the foregoing remarks, it is respectfully believed that essential elements of a *prima facie* case of obviousness are missing.

Accordingly, Applicants respectfully submit that this rejection of **claims 1** and **11** should be withdrawn.

3. Claims 7, 8, 17, and 18 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,520,402 (**Orme-Marmerilis et al.**), U.S. Patent No. 5,746,844 (**Sterett et al.**), or Japanese Patent No. 10-266803 (**Yamaguchi**) in view of U.S. Patent No. 4,656,048 (**Kudoh et al.**), U.S. Patent No. 6,309,711 (**Tseng et al.**), and U.S Patent No. 6,501,663 (**Pan**).

Applicants respectfully traverse this rejection, for the following reasons.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Tseng et al.**, and **Pan**, alone or in combination, fail to remedy the above-discussed deficiencies of **Kudoh et al.**

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended. For example, **Orme-Marmerilis et al.**, **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the electric circuit used for electrical connection between electric instruments mounted on the construction member,
>
> wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data associated with a reference coordinate system provided in the construction member disposed on a transfer unit and having the origin in the construction member.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the construction member to form the electric circuit on the construction member based on the second set of three-dimensional data,
>
> wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claims 7 and 8 should be withdrawn by virtue of their dependency.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended. For example, **Orme-Marmerilis et al.**, **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the

electric circuit used for electrical connection between electric instruments mounted on the construction member,

wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data associated with a reference coordinate system provided in the construction member or on the intermediate member disposed on a transfer unit and having the origin in the member provided.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Pan**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the intermediate member to form the electric circuit on the surface of the intermediate member based on the second set of three-dimensional data,

wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claims 17 and 18 should be withdrawn by virtue of their dependency.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue, as discussed herein above. In view of those substantial, important differences, it would not have been obvious to combine/modify the cited art as suggested by the Examiner to attempt to arrive at the features set forth in **claims 1** and **11**.

Even if, *arguendo,* the teachings of the cited art could be combined in the manner suggested by the Examiner, which they could not, such combined teachings would still fall far short of the combinations of features as set forth in claims 1 and 11. Thus, a person of ordinary skill in the art would not have arrived at the combinations of features as set forth in claims 1 and 11.

In view of the foregoing remarks, it is respectfully believed that essential elements of a *prima facie* case of obviousness are missing.

Accordingly, Applicants respectfully submit that this rejection of **claims 7, 8, 17,** and **18** should be withdrawn.

4. Claims 51-56 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,520,402 (**Orme-Marmerilis et al.**), U.S. Patent No. 5,746,844 (**Sterett et al.**) or Japanese Patent No. 10-266803 (**Yamaguchi**) in view of U.S. Patent No. 4,656,048 (**Kudoh et al.**), U.S. Patent No. 6,309,711 (**Tseng et al.**), and Japanese Patent No. 11-40937 (**Kuwahara et al.**).

Applicants respectfully traverse this rejection, for the following reasons.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to remedy the above-discussed deficiencies of **Kudoh et al.**

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended. For example, **Orme-Marmerilis et al.**, **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to

describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the electric circuit used for electrical connection between electric instruments mounted on the construction member,
>
> wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

> converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data associated with a reference coordinate system provided in the construction member disposed on a transfer unit and having the origin in the construction member.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 1, as amended, including the following features:

intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the construction member to form the electric circuit on the construction member based on the second set of three-dimensional data,

wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claims 51-53 should be withdrawn by virtue of their dependency.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended. For example, **Orme-Marmerilis et al.**, **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

the set of three-dimensional data used to determine a position and a profile of the construction member, a position of the electric circuit, and a shape of the electric circuit, the electric circuit used for electrical connection between electric instruments mounted on the construction member,

wherein the set of three-dimensional data is prepared when designing the machine and associated with a reference coordinate system provided in the machine, the origin of the coordinate system being located at any position of the machine, and the set of three-dimensional data includes coordinates of points for determining arrangement of the electric circuit, a distance between any two of the points adjacent to each other, and a cross-sectional area of the electric circuit extended between the two points.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> converting the set of three-dimensional data of the coordinate system having the origin located at any position of the machine to a second set of three-dimensional data associated with a reference coordinate system provided in the construction member or on the intermediate member disposed on a transfer unit and having the origin in the member provided.

Orme-Marmerilis et al., **Sterett et al.**, **Yamaguchi, Kudoh et al.**, **Tseng et al.**, and **Kuwahara et al.**, alone or in combination, fail to describe, teach, or suggest the combination of features as set forth in claim 11, as amended, including the following features:

> intermittently jetting a molten metal against the construction member to define rows of metal grains so as to deposit the molten metal on a surface of the intermediate member to form the electric circuit on the surface of the intermediate member based on the second set of three-dimensional data,
>
> wherein the deposited metal grains overlap one another such that the electric circuit has the cross-sectional area stored in the second set of three-dimensional data between the two points.

Accordingly, in view of the above, Applicants respectfully submit that this rejection of claims 54-56 should be withdrawn by virtue of their dependency.

There are substantial, important differences between the art relied upon by the Examiner and the features set forth in the claims in issue, as discussed herein above. In view of those substantial, important differences, it would not have been obvious to combine/modify the cited art as suggested by the Examiner to attempt to arrive at the features set forth in **claims 1** and **11**.

Even if, *arguendo,* the teachings of the cited art could be combined in the manner suggested by the Examiner, which they could not, such combined teachings would still fall far short of the combinations of features as set forth in claims 1 and 11. Thus, a person of ordinary skill in the art would not have arrived at the combinations of features as set forth in claims 1 and 11.

In view of the foregoing remarks, it is respectfully believed that essential elements of a *prima facie* case of obviousness are missing.

Accordingly, Applicants respectfully submit that this rejection of **claims 51-56** should be withdrawn.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due now or in the future with respect to this application, to Deposit Account No. 01-2340.

Respectfully submitted,
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